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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/847,072

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Kaushal Thakker

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07/23/2004

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EXAMINER

EWART, JAMES D

ART UNIT

PAPER NUMBER

2683

DATE MAILED: 07/23/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/847,072

Applicant(s)

THAKKER, KAUSHAL

Examiner

James D Ewart

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

*Response to Arguments*

1. The applicant's arguments regarding prior art rejections, filed 15 May 2004, have been fully considered by the Examiner, but they are not deemed to be persuasive.
2. Regarding Applicant's argument that the applicant's invention doesn't have an HLR in the IP network, the independent claims states that the IP network does not have an associated HLR. Being that the mobile terminal registers with the HLR of the cellular network through the IP network, the IP Network does not provide the HLR functions of the mobile terminal and thus does not have an associated HLR. Further, the HLR is related to cellular networks. The IP Network uses home agents (IP HLR), which provide similar functions of the cellular HLR, but a home agent is not the same as a cellular HLR. Within the IP network, each MS is assigned a permanent IP address, called the home address, which identifies the mobile station's home subnet and does not change with the location of the MS in the network see Chang et al U.S. Patent No. 6,487,406 Column 4, Lines 46-51. A cellular HLR is solely related to a cellular network and thus the IP network of Gremmelmaier does not have an associated HLR as indicated by applicant.
3. Applicant's argues that registering the mobile device in the PLMN via the IP network makes Applicant's invention is unique from the teaching of Gremmelmaier. Gremmelmaier states in Column 1, Lines 40-45 that "The invention is therefore based on an object to indicate an arrangement for mobile communication, with which a simplified roaming of subscribers of the mobile communication also becomes possible between the Internet (IP-network) and the

public mobile radio network, and that contributes overall to a simplification of global voice and data communication. “ Gremmelmaier also states in Column 4, Lines 45-52 that “The PLMN-gateway 109 assumes the transmission of signal reports from the public mobile radio network 107 (FIG. 1) into the IP-network 101 or the reverse, in particular for the HLR 109a, wherein the updating of location specific and other subscriber data (what is referred to as "location update") between the IP-network and the public network is enabled.” Both of which Examiner equates with registering the mobile device in the PLMN via the IP network and enables the IP network to provide IP services to a mobile user.

4. Regarding the uniqueness of applicant’s invention of providing an H.323

gatekeeper/service node to provide location specific services to the mobile terminal.

Gremmelmaier shows the use of H.323 in figure 5, 403. In addition, Gremmelmaier indicates the use of a gatekeeper in Column 2, Line 50; Column 4, Line 67 and Column 5, lines 30-31.

Regarding location specific services provided by the (SN), examiner equates location specific services with data or cell phone service. Also see Salama et al. U.S. Patent No. 6,584,093

Column 2, Lines 18-22 which states “Gatekeepers: a gatekeeper is an H.323 entity that provides address resolution and controls access for all types of H.323 endpoints. In addition, a gatekeeper may perform other services such as accounting and authentication.” Also see Patel et al. U.S. Patent No. 6,400,950 which states in Column 1, Lines 26-35 that “The Gatekeeper stores an Internet Protocol (IP) address for the H.323 endpoint, so that when a connection to that H.323 endpoint is requested, the Gatekeeper will know where to route the connection. If the H.323 endpoint is a Mobile Station (MS), the IP address for the MS being served by an H.323 system

typically includes the IP address for a Mobile Switching Center (MSC) serving the MS along with a specific port number for that MS.”

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 3- 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gremmelmaier (US Patent No. 6,308,267) in view of Chang et al. (US Patent No. 6,487,406) and further in view of Salama et al. (US Patent No. 6,584,093)

Referring to claim 1, Gremmelmaier teaches a method of providing services to a mobile terminal within a common service area (Figure 1; 109) serviced by both a Public Land Mobile Network (PLMN) and an Internet Protocol (IP) network (Figure 1), comprising the steps of: responsive to a request, to the IP network for service's from the mobile terminal, which is roaming from the PLMN (Column 1, Lines 40-45; Column 2, Line 5, and Column 4, Lines 45-52), utilizing a network access controller (NAC) associated with the IP network for emulating a mobile switching center/visitor location register (MSC/VLR) (Column 2, Lines 5-18) for registering the mobile terminal with the PLMN home location register (HLR) (Column 1, Lines 40-45; Column 3, Lines 34-35 & Column 4, Lines 45-52) via an IP network radio base station (Column 3, Lines 32-37 and Column 4, Lines 46-52) and an H.323 gatekeeper/service node (SN)

(Column 2, Line 50; Column 4, Line 67; Column 5, Lines 30-31 and Figure 5, 403); and providing requested service to the mobile terminal upon confirmation from the wireless network of eligibility for the requested service (Column 4, Lines 18-29 and 46-52), but does not specifically teach wherein the IP network lacks an associated HLR. Chang et al teaches wherein the IP network lacks an associated HLR (Column 2, Lines 51-66 and figures 4 and 5). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Gremmelmaier with the teaching of Chang et al wherein the IP network lacks an associated HLR to provide a protocol and mobility management design for wireless Internet communications which can easily operate in conjunction with merging and existing PCS technologies (Column 2, Lines 16-19). Gremmelmaier and Chang et al. teach the limitations of claim 1, but do not teach wherein the gatekeeper includes a service layer for providing wireless services associated with a common area. Salama et al. teaches wherein the gatekeeper includes a service layer for providing wireless services associated with a common area (Column 2, Lines 59-60 and Column 3, Lines 22-23). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Salama et al. wherein the gatekeeper includes a service layer for providing wireless services associated with a common area to provide call routing in internet telephony systems (Column 7, Lines 1-2).

Referring to claim 3, Gremmelmaier further teaches the step of the mobile terminal performing a location update with the IP network utilizing the IP network radio base station (Column 4, Lines 35-42 & 46-52).

Referring to claim 4, Gremmelmaier further teaches the step of the IP network registering the mobile terminal with the wireless network (Column 4, Lines 45-52)

Referring to claim 5, Gremmelmaier further teaches the step of the IP network registering the mobile terminal in an IP Network Mobile Services Center/Visitor Location Register (MSC/VLR) (Column 4, Lines 46-52).

Referring to claim 6, Gremmelmaier further teaches the step of the IP network MSC/VLR connecting with the PLMN HLR for registering the mobile terminal (Column 4, Lines 45-52 and Figure 1; 105).

Referring to claim 7, Gremmelmaier further teaches the step of wireless HLR providing the list of services associated with the common area to the IP network MSC/VLR, for which the mobile terminal is eligible (Column 4, Lines 30-33 & 45-52)

Referring to claim 8, Gremmelmaier teaches a telecommunications system for providing wireless services to a mobile terminal within a common service area (Column 1, Lines 40-45) serviced by both a Public Land Mobile Network (PLMN) and an Internet Protocol (IP) network comprising (Figure 1): the Public Land Mobile Network (PLMN) including an associated home location register (HLR) (Column 3, Lines 34-35) configured to provide wireless service to mobile terminals throughout a specified service area (Figure 1; 107); the Internet Protocol network adapted to provide service to the mobile terminal within the common service area (Column 4, Lines 18-22) wherein said IP network comprises: a radio base station (RBS) for

connecting to the associated HLR in said PLMN (Figure 1) via an IP network base station controller (Figure 1; 115), a network access controller (Column 2, Lines 5-6) for emulating a mobile switching center/visitor location register HLR/VLR (Column 2, Lines 5-18), and a H.323 gatekeeper/service node (SN) (Column 2, Lines 5-6), all located in the common service area (Figure 1); and an interface for operably coupling the Internet Protocol (IP) network to the PLMN (Figure 1; 109); wherein said IP network is configured to detect service requests from mobile terminals associated with the PLMN (Column 1, Lines 54-62, Column 3, Lines 23-30 and Figure 1; 105), but does not specifically teach wherein the IP network lacks an associated HLR. Chang et al teaches wherein the IP network lacks an associated HLR (Column 2, Lines 51-66 and figures 4 and 5). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Gremmelmaier with the teaching of Chang et al wherein the IP network lacks an associated HLR to provide a protocol and mobility management design for wireless Internet communications which can easily operate in conjunction with merging and existing PCS technologies (Column 2, Lines 16-19). Gremmelmaier and Chang et al. teach the limitations of claim 8, but do not teach wherein the gatekeeper includes a service layer for providing wireless services associated with a common area. Salama et al. teaches wherein the gatekeeper is configured to provide services associated with a common area (Column 2, Lines 59-60 and Column 3, Lines 22-23). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Salama et al. wherein the gatekeeper is configured to provide services associated with a common area to provide call routing in internet telephony systems (Column 7,



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Lines 1-2). The radio access network of the IP network has more than one BTS. Thus functions of a base station controller are provided.

Referring to claim 9, Gremmelmaier further teaches wherein the IP network utilizes H.323 protocol (Figure 5; 403).

Referring to claim 10, Gremmelmaier further teaches wherein the PLMN is a Global System for Mobile communication (GSM) network (Column 3, Lines 20-22 and Column 4, Lines 3-4).

Referring to claim 11, Gremmelmaier further teaches wherein the RBS is configured to provide an air interface to mobile terminals of the PLMN (Column 3, Lines 19-30 and Column 4, Lines 3-11).

Referring to claim 12, Gremmelmaier further teaches wherein the Network Access Controller (NAC) (Column 2, Line 5) is configured to provide the functions of a Mobile Switching Center/Visitor Location Register (Column 2, Lines 5-18) enabling registration of mobile terminals with a PLMN home location register (HLR) and H.323 procedures towards the H.323 Service node.

Referring to claim 13, Gremmelmaier further teaches wherein said H.323 (Figure 5 and Column 4, Lines 67 to Column 5, Line 1) gatekeeper and Service Node (SN) includes a service

layer for providing location specific services to mobile terminals, said location specific services related to said shared service area (Column 4, Lines 18-20, 30-33 & 45-52; 13, 35-45).

Examiner equates location specific services with data or cell phone service.

Referring to claim 14, Gremmelmaier further teaches wherein said IP network comprises a Radio Network Server configured to provide the base station controller functions of a PLMN within said shared service area (Figure 1; 115). The radio access network of the IP network has more than one BTS. Thus functions of a base station controller are provided.

Referring to claim 15, Gremmelmaier further teaches an Internet Protocol (IP) network supporting the provision of site specific services to roaming mobile terminals (Column 1, Lines 40-45; Column 2, Line 5 and Column 4, Lines 45-52), in a service area that is common to the IP network and a Public Land Mobile Network (PLMN) (Figure 1 and Column 1, Lines 38-45) comprising: a Radio Base Station (RBS) providing an air interface for coupling a mobile terminal associated with the PLMN to the IP network (Figure 1); a Network Access Controller (NAC) (Column 2, Line 5) coupled with the RBS and configured to provide the functions of a Mobile Switching Center/Visitor Location Register (MSC/VLR) (Column 2, Lines 5-18), wherein said NAC registers the mobile terminal, in the common service area, with the home location register (HLR) in the PLMN (Column 1, Lines 40-45 and Column 4, Lines 45-52) and towards the H.323 Service Node using standard H.323 admission control procedures (Figure 5, & Column 4, Line 67 to Column 5, Line 1); and configured to provide location specific services to said mobile terminal (Figure 5; 403; Column 2, Line 50; Column 4, Line 67 and Column 5, Lines

30-31), said location specific services related to the common service area shared by both said PLMN and said IP network (Figure 1; 109), but does not specifically teach wherein the IP network lacks an associated HLR. Chang et al teaches wherein the IP network lacks an associated HLR (Column 2, Lines 51-66 and figures 4 and 5). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Gremmelmaier with the teaching of Chang et al wherein the IP network lacks an associated HLR to provide a protocol and mobility management design for wireless Internet communications which can easily operate in conjunction with merging and existing PCS technologies (Column 2, Lines 16-19). Gremmelmaier and Chang et al. teach the limitations of claim 15, but do not teach wherein the gatekeeper includes a service layer for providing wireless services associated with a common area. Salama et al. teaches wherein the gatekeeper includes a service layer for providing wireless services associated with a common area (Column 2, Lines 59-60 and Column 3, Lines 22-23). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Salama et al. wherein the gatekeeper includes a service layer for providing wireless services associated with a common area to provide call routing in internet telephony systems (Column 7, Lines 1-2). Examiner equates location specific services with data or cell phone service.

Referring to claim 16, Gremmelmaier further teaches wherein the RBS further comprises a Base Transceiver Station (BTS) (Figure 1; 115).

Referring to claim 17, Gremmelmaier further teaches wherein the RBS further comprises an Abis Gateway (AGW) (Column 3, Lines 23-26 and Figure 1; 105).

Referring to claim 18, Gremmelmaier further teaches a Media and Signaling Gateway (MSGW) operably coupled to the NAC (Figure 1; 109).

Referring to claim 19, Gremmelmaier further teaches wherein the IP network supports H.323 protocol (Figure 5; 403).

Referring to claim 20, Gremmelmaier further teaches wherein the PLMN is a Global System for Mobile communication systems (GSM) network (Column 3, Lines 20-22 and Column 4, Lines 3-4).

Referring to claim 21, Gremmelmaier further teaches wherein the IP network is configured to emulate a PLMN base station compatible with the mobile terminal (Figure 1; 105).

Referring to claim 22, Gremmelmaier further teaches wherein the IP network emulates a mobile switch compatible with the PLMN (Figure 1).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Lee U.S. Patent No. 6,539,225 discloses seamless data network telecommunication service during mobile wireless call handoff.

Leung U.S. Patent No. 6,195,705 discloses mobile IP mobility agent standby protocol.

Patel et al. U.S. Patent No. 6,400,950 discloses system and method for deregistration of multiple H.323 end points from a H.323 gatekeeper.

Willkie et al. U.S. Patent No. 6,230,012 discloses IP mobility support using proxy mobile node registration.

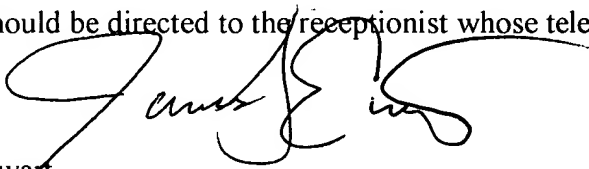
Perkins, C.E.; Internet Computing, IEEE , Volume: 2 , Issue: 1 , Jan.-Feb. 1998

Pages: 58 - 69

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D Ewart whose telephone number is (703) 305-4826. The examiner can normally be reached on M-F 7am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (703)308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

  
Ewart  
July 21, 2004

  
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